Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

A One Year Life Cycle for Saperda candida Fab. Reared in an Apple (Col.).

In Bulletin No. 156 of the Arkansas Agricultural Experiment Station the writer called attention to the fact that it seemed quite probable that *Saperda candida* could be reared through all of its stages in the fruit of apple. At the time of the writing of the above mentioned bulletin the writer had in rearing two larvae which were at that time nearly one year old. The eggs from which these larvae had hatched had been deposited in an apple by a beetle during the season of 1917.

The eggs hatched in this apple, and the larvae were allowed to burrow around in the fruit until it began to decay, after which each larva was transferred to a fresh fruit. The borers were transferred to fresh fruits whenever the condition of the latter made it necessary to do so. During the winter the apple containing the insects was kept in the laboratory so that temperature conditions were favorable for them all the year.

Reared in this way, one larva pupated and emerged as an adult in the summer of 1918, which was just one year after the egg from which it hatched, had been deposited. During the course of their development larvae were fed upon all sizes of apples, ranging from young green fruits not much over one and one-half inches in diameter to fully ripened and matured fruits. Part of the time the borers fed upon soft and rotten fruits. The larva which matured in the fruit had probably fed upon six different apples during the course of its development.

It is possible, in fact quite likely, that the unfavorable conditions under which the larvae were reared, were responsible for the development of one of them in one year. The beetle which developed from this larva was only about 15 mm. long, whereas a normal beetle is usually from 18 to 20 mm. in length. The second larva died at about the time when the first one pupated. It seems most likely that the second larva died because of the condition of the apple at the time of its death. The latter was in the same soft and rotten condition as the apple in which the first larva pupated.

In view of the rapid and apparently normal development of the larvae up until winter of their first year, it seems quite likely that they would attain their normal development in the fruit if they were given fresh material from time to time so that the medium in which they were feeding would not become soft, gelatinous and even liquid as was the case many times in the apples in which we reared our larvae.—Geo. G. Becker, Arkansas Agricultural Experiment Station, Fayetteville, Arkansas.